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The iron contained in this ore is in the same state as it is found in Wolfram, namely, brown oxide ; and this oxide is mineralized by the new metallic acid in the same manner as the oxides of iron and manganese are mineralized by the tungstic acid, or rather oxide. Several facts which have appeared in the course of this investigation seem to prove that this new metal differs from tungsten and the other acidifiable metals by a more limited extent of oxidation ; for, unlike these, it seems to be incapable of retaining oxygen sufficient to enable the total quantity to combine with fixed alkalis.

All that can be said at present as to the uses of this metal is, that an olive-green prussiate, and an orange-coloured gallate they yield, are both very fine colours, which, as they do not appear to fade when exposed to light and air, may probably be employed with advantage as pigments. The author lastly hazards a conjecture, that several of the newly discovered metals and other substances, which are now considered as simple, primitive, and distinct bodies, will, upon further examination, turn out to be compounds. Meanwhile as the new metal here described appears hitherto distinct from all the others, it cannot but be expedient to distinguish it by a proper appellation ; and the least objectionable that has hitherto occurred, is that of Columbium.

*A Description of the Anatomy of the Ornithorhynchus paradoxus.*  
By Everard Home, Esq. F.R.S. Read December 17, 1801.  
[*Phil. Trans.* 1802, p. 67.]

Two specimens of this curious animal, lately brought from New South Wales, the one male and the other female, and both full grown and perfect, having been submitted to the inspection and close examination of Mr. Home, by Sir Joseph Banks, this gentleman has availed himself of the favourable opportunity to draw up the full account of all that is hitherto known concerning its habits, of its external appearance, and internal structure now before us.

The animal has hitherto been only found in the fresh-water lakes in the interior parts of the above-mentioned country. It does not swim upon the surface of the water, but comes up occasionally to breathe. It chiefly inhabits the banks of these lakes, and is supposed to feed in the muddy places which surround them ; but the particular kind of food on which it subsists is not known.

As in its anatomical structure this animal differs in many respects from other quadrupeds, those who interest themselves in inquiries of this nature will be gratified to find in this paper a comparative view of those deviations ; and when they have satisfied themselves in this respect, they will probably allow that it is long since facts so singular and novel have been brought to light respecting the science of comparative anatomy. Being obliged, as is usual in all descriptive communications of this kind, to refer to the paper itself for an adequate estimate of its merits, we shall dwell briefly upon a few of

the most striking peculiarities, from which some idea may be gathered of the importance of this performance.

Besides four grinding teeth, one at each end of the two jaws, the animal has two small pointed horny teeth upon the projecting part of the posterior portion of the tongue, the points of which are directed forwards. These, it is thought, are intended to prevent the food from being pushed into the fauces during the process of mastication; and such have as yet been observed in no animal except the flamingo, which has a row of similar small teeth at each side of the tongue.

The fifth pair of nerves, which supplies the muscles of the face, and extend to the membrane that covers the bills, were found uncommonly large; whence it is inferred that probably the sensibility of the different parts of this bill is very great, and that being capable of nice discrimination in its feeling, it answers in some respects the purposes of a hand.

A striking peculiarity is observed in the structure of the bones of the chest. The scapulæ, which are of an uncommon shape, are not connected with the chest, but with a bone placed above the sternum, the upper part of which answers the purpose of clavicles. The cartilages also of the ribs are not placed next the sternum but between two portions, and about the middle of each rib: and the false ribs have their cartilages terminated by thin bony scales, which slide on one another in the motions of the chest. From this singular construction, it appears that the capacity of the chest can undergo a very considerable degree of contraction and dilatation.

On each of the hind legs of the male, at the setting on of the heel, is a crooked, strong, sharp-pointed spur, which is retractile, but may be considerably extended. Its use is conjectured to be the confining the female in the act of copulation: but in nothing, perhaps, does this animal differ more from the other quadrupeds than in the parts of generation. Externally there is no appearance of these organs in either sex, the orifice of the anus being a common opening to the rectum and prepuce in the male, and to the rectum and vagina in the female. The testicles are situated in the cavity of the abdomen, the glans penis is double, one part being directed to the right and the other to the left. The female has no regularly formed uterus, but towards the end of the vagina are two openings, each leading into a cavity resembling the horn of the uterus in quadrupeds, but terminating in a fallopian tube, which opens into the capsule of an ovium. From various circumstances attending this singular configuration, and from some analogy it bears to the similar organ in birds, our author is inclined to believe that this animal will be found to be oviparous in its mode of generation.